

LIVE/VIRTUAL/CONSTRUCTIVE

The USMC Approach

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CAST Trainer reduced safety violations by 80%



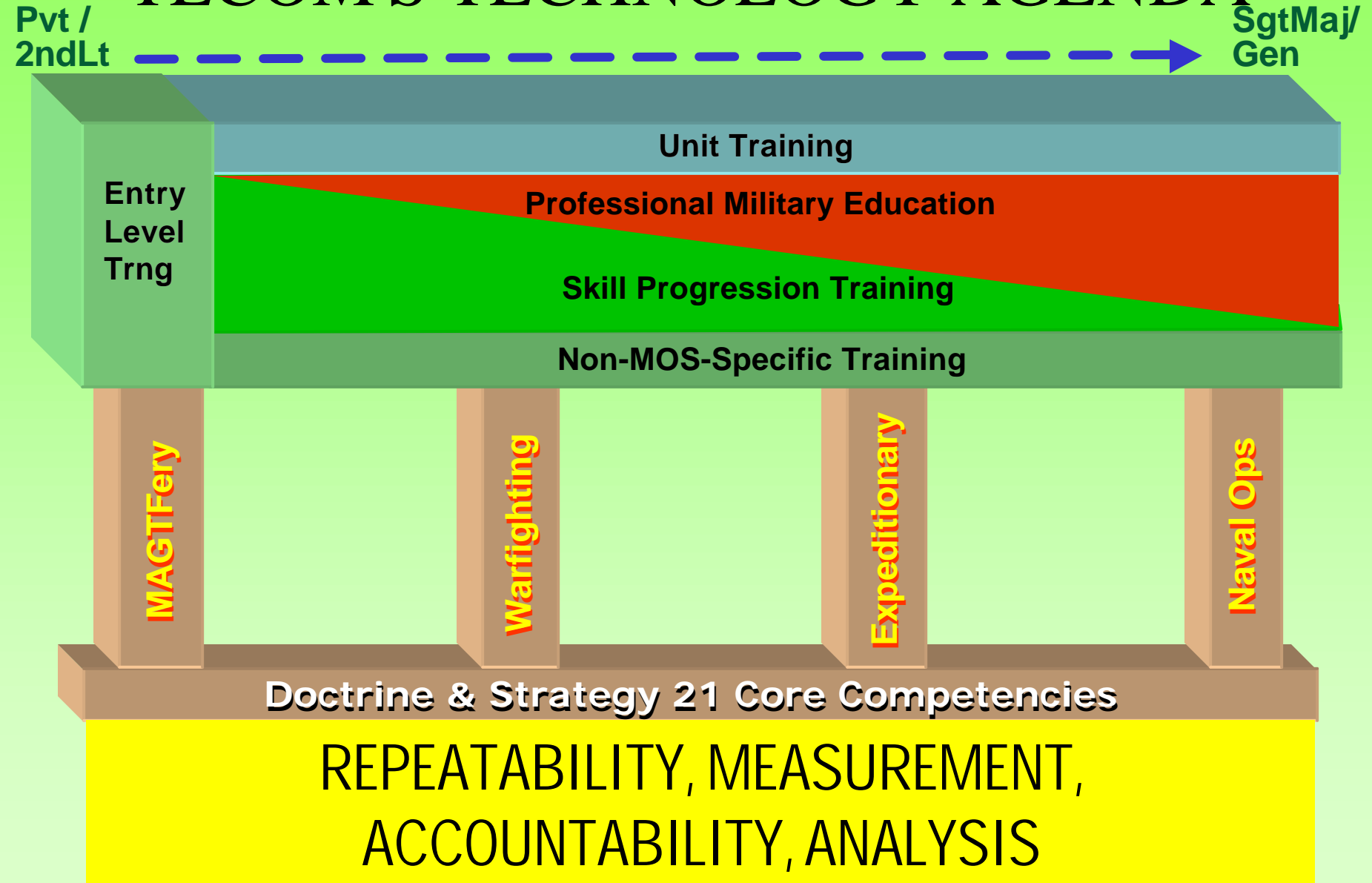
1999

12/13/2001

Live Fire Training and Testing Conference

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TECOM'S TECHNOLOGY AGENDA



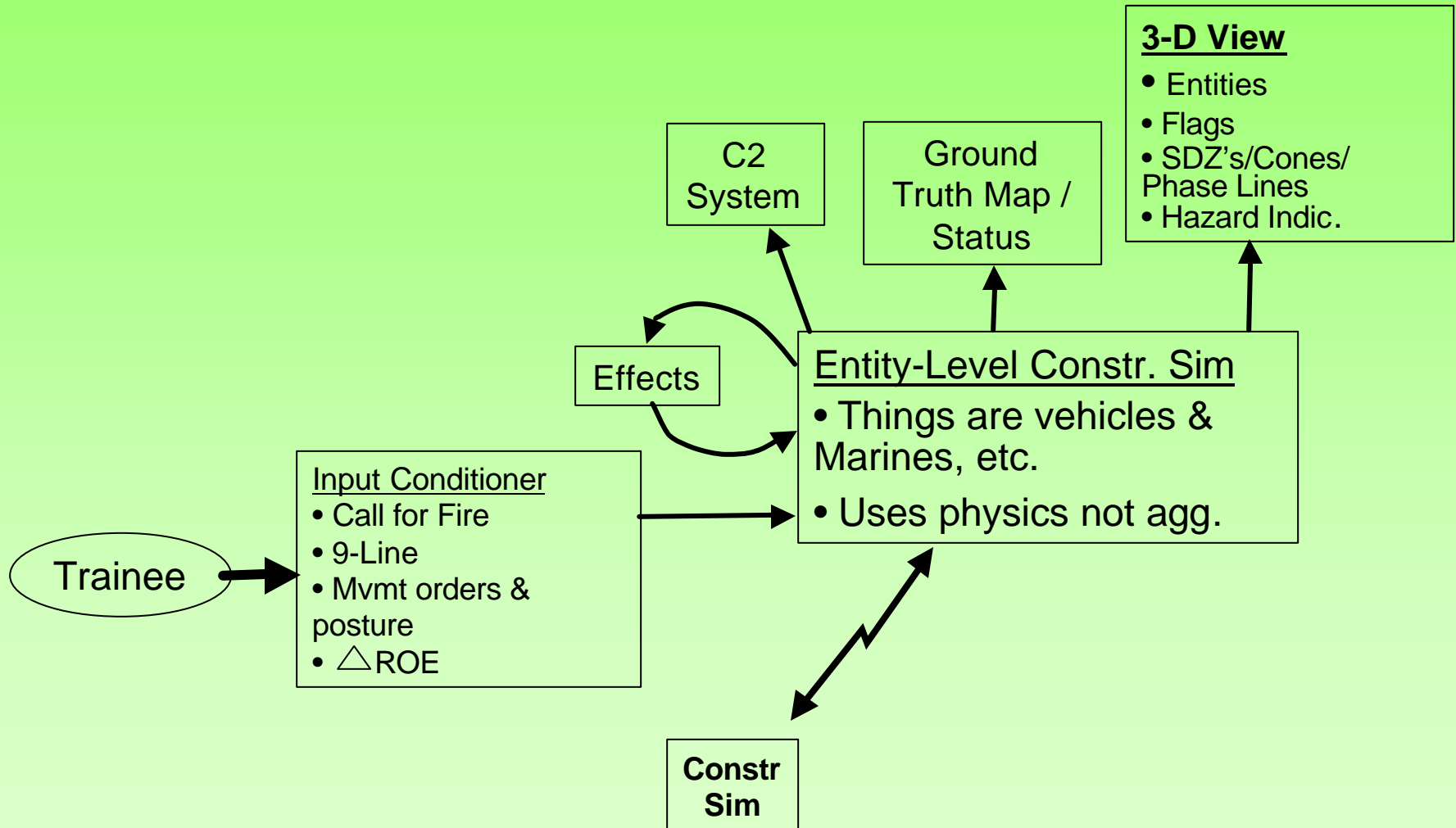


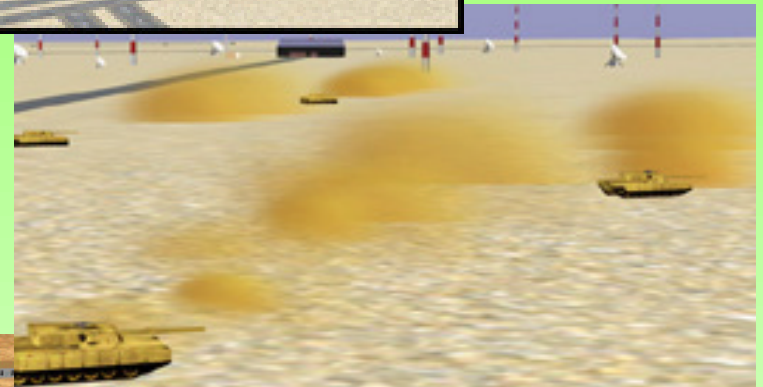
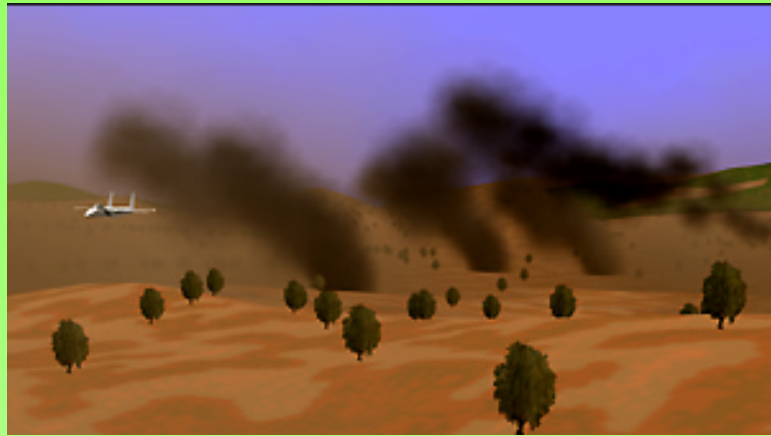
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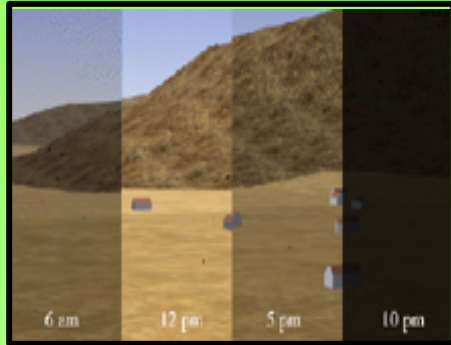
Live Fire Training and Testing Conference

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CACCTUS







Time-of-Day



Precipitation



Fog / Haze / Obscurants



Clouds



Lighting

CALL FOR FIRE(MARK)

CALL FOR FIRE(ADJUST)

FDC Call Sign: Observer Call Sign:

- Grid:

CAS BRIEFING FORM

• Aircraft Call Sign: Terminal Controller:

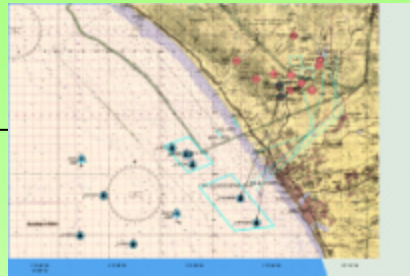
- IP/BP:
- Heading: Offset:
- Distance:
- Target Elevation:
- Target Description:
- Target Location:
- Mark: Code:
- Position friendlies: Mark:
- Egress:





Combined Arms Staff Training

Composite Exercise: Force-on-Force



Battle Staff Training Facility (BSTF) Quantico



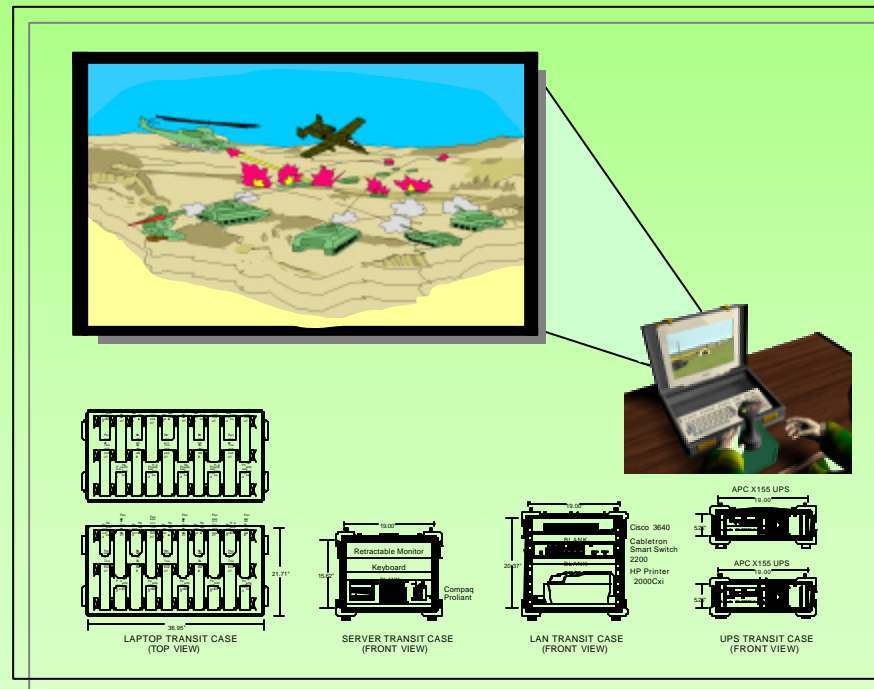
Combined Arms Staff Trainer, Camp Pendleton, CA



Combined Arms Staff Trainer, Camp Lejeune, NC



PACKED LIKE LUGGAGE



CACCTUS-ENABLED MAGTF TRAINING

Before crossing the LOD

- **Maneuvering in the Ocean**
- **Amphibious & MPF Operations Planning**
- **Pre-Assault IPB**
 - Visualization of sensor employment plan
- **Logistics-Oriented Operations Planning & Logistics Supportability Constraints**

CACCTUS-ENABLED MAGTF TRAINING

After crossing the LOD

- **Red Maneuvers & Fights Back**
- **Ground Truth (board) Portrayed on Today's C2 Systems**
 - Selectable masking & misreporting
- **Visualization of 4-D Deconfliction Problem**
 - Monitor and flag dangerous fire missions
 - Visualization of air missions
 - strike & assault

CACCTUS-ENABLED MAGTF TRAINING

After crossing the LOD (2)

- **Commanders' Influence through C2 Systems**
 - C2 system operator works his system for his commander in realistic scenario

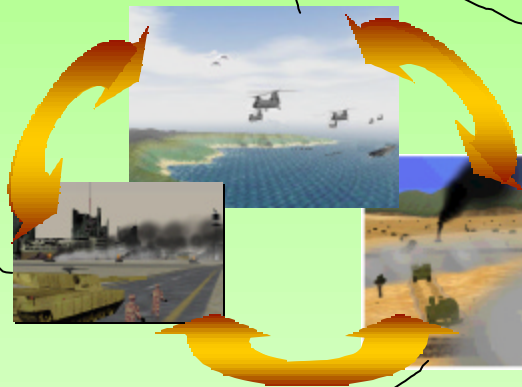
CACCTUS-ENABLED MAGTF TRAINING

After ENDEX

- **After Action Review**
 - **Reconstruction**
 - **TTECG Critique at the CAST**
 - **PME**
 - **TECOM Analysis**
 - **Accessible to the Fleet Marine**
 - **Viewable on Any PC with the Appropriate Plug-In**
 - **Take it Home**
 - **Prepare for Next CAX or Exercise**

Deployable Virtual Training Environment

PROJECT APPROACH: Virtual Training Combat Skills



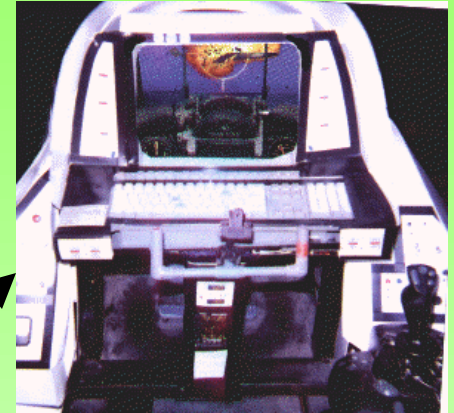
DEPLOYABLE TRAINING NETWORK

Deployable Virtual Training Environment

Integrating Shipboard Training Devices



COMMAND AND CONTROL
SYSTEMS



AVIATION SIMULATORS



SMALL ARMS TRAINER

ARMORED VEHICLE
APPENDED TRAINER



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THE FUTURE

- **CAST Upgrade**
- **Distributed Training**
- **Range Control via PLI Injection**
- **Leave the CAST Building**
- **Mission Rehearsal**
- **Virtual Gym**
 - **Shipboard**
 - **Garrison**